



FCC RF Test Report

Applicant: Baicells Technologies Co., Ltd.
Address of Applicant: 9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Equipment Under Test (EUT)
Product Name: LTE Indoor CPE
Model No.: EG3015M-M30-HP-EUD, EG3015M-M11-HP-EUD
Trade mark: Baicells
FCC ID: 2AG323015MM30HPEUD
Applicable standards: FCC CFR Title 47 Part 2, Part 96, Part 27M
Date of sample receipt: 17 Oct., 2022
Date of Test: 18 Oct., to 13 Nov., 2022
Date of report issued: 22 Nov., 2022
Test Result: PASS

Tested by:

Mike Ou

Date:

22 Nov., 2022

Reviewed by:

Wenwen Zhang

Date:

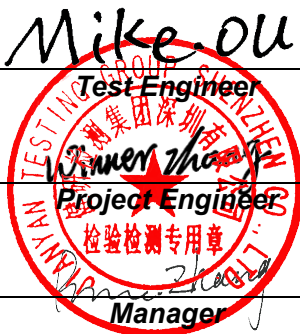
22 Nov., 2022

Approved by:

Wenwen Zhang

Date:

22 Nov., 2022



This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	14 Nov., 2022	Original
01	22 Nov., 2022	Updated page 10.

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3 General Information

3.1 Client Information

Applicant:	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Manufacturer	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China

3.2 General Description of E.U.T.

Product Name:	LTE Indoor CPE			
Model No.:	EG3015M-M30-HP-EUD, EG3015M-M11-HP-EUD			
Operation Frequency range:	LTE band 48:	3550MHz~3700MHz		
	LTE Band 41:	2496MHz~2690MHz		
Modulation type:	Uplink	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input checked="" type="checkbox"/> 64QAM
	Downlink	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input checked="" type="checkbox"/> 64QAM
Antenna type:	Internal antenna			
Antenna gain:	LTE band 48: 5.5 dBi (declare by Applicant)			
	LTE band 41: 3.5 dBi (declare by Applicant)			
Antenna Transmit Mode:	2x4 MIMO (2TX, 4RX)			
	ANT 1, ANT 3 support TXRX			
	ANT 2, ANT 4 only support RX			
Category device:	End user device			
AC adapter:	Model: S24B72-120A200-0K Input: AC100-240V, 50/60Hz, 0.8A Output: DC 12.0V, 2.0A			
Remake	Model No.: EG3015M-M11-HP-EUD are identical on external structure, circuitry design, PCB layout, electrical components used, internal wiring and functions with the model; EG3015M-M30-HP-EUD which we chose to be tested and only different on LTE Band. Different model (s) and LTE band: EG3015M-M30-HP-EUD: B41/B48 EG3015M-M11-HP-EUD: B48.			
Test Sample Condition:	The test samples were provided in good working order with no visible defects.			

3.3 Test Mode and Environment

Test Mode:	
QPSK mode:	Keep the EUT in QPSK modulation mode to communication
16QAM mode:	Keep the EUT in 16QAM modulation mode to communication
64QAM mode:	Keep the EUT in 64QAM modulation mode to communication
Remark: 1. The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report. 2. Pre-scan all modulation type (QPSK, 16-QAM, 64-QAM), and found the QPKS and 64-QAM was the worst case.)	
Operating Environment:	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -10°C ~ +45°C
Humidity:	5 % ~ 95 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 120 Vac, Extreme: Low 102 Vac, High 138 Vac

3.4 Description of Test Auxiliary Equipment

The EUT has been tested as an independent unit.

3.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radiated Emission (30MHz ~ 1GHz) (3m SAC)	±4.45 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	±5.34 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	±5.34 dB
Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.	

3.6 Additions to, Deviations, or Exclusions from the Method

No

3.7 Laboratory Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf
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3.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

3.9 Test Instruments list

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2024
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	03-07-2022	03-06-2023
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	03-08-2022	03-07-2023
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	07-02-2021	07-01-2024
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	03-08-2022	03-07-2023
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	04-07-2022	04-06-2023
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	04-07-2022	04-06-2023
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-6	04-07-2022	04-06-2023
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	01-20-2022	01-19-2023
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXJ001-3	01-20-2022	01-19-2023
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXJ002-7	03-30-2022	03-29-2023
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-05-2022	03-04-2023
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	01-20-2022	01-19-2023
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	10-27-2021	10-26-2022
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-20-2022	01-19-2023
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	01-20-2022	01-19-2023
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG001-7	01-20-2022	01-19-2023
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Conducted Method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9020B	WXJ081-1	06-29-2022	06-28-2023
Spectrum Analyzer	Agilent	N9020A	WXJ004-1	10-17-2022	10-16-2023
Simulated Station	Rohde & Schwarz	CMW500	WXJ081	06-29-2022	06-28-2023
Temperature Humidity Chamber	ZHONG ZHI	CZ-A-80D	WXJ032-3	03-19-2021	03-18-2023
DC Power Supply	Keysight	E3642A	WXJ025-2	N/A	
RF Control Unit	Tonscend	JS0806-1	WXG010	N/A	
Band Reject Filter Group	Tonscend	JS0806-F	WXG010-1	N/A	
Test Software	Tonscend	TS+	Version: 2.6.9.0526		

4 Measurement Setup and Procedure

4.1 Test Channel

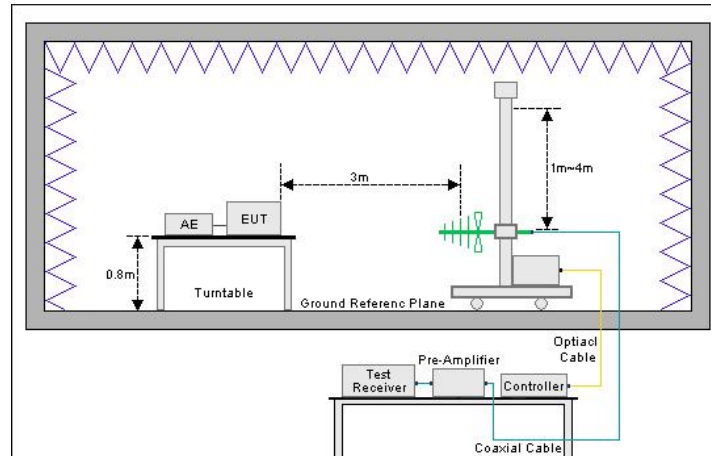
According to ANSI C63.26-2015 chapter 5.1.2.1 Table 2 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

LTE band 48					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
10 MHz			20 MHz		
Lowest channel	55290	3555.0	Lowest channel	55340	3560.0
Middle channel	55990	3625.0	Middle channel	55990	3625.0
Highest channel	56690	3695.0	Highest channel	56640	3690.0
LTE band 41(2496MHz ~ 2690MHz)					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
5 MHz			10 MHz		
Lowest channel	39675	2498.5	Lowest channel	39700	2501.0
Middle channel	40620	2593.0	Middle channel	40620	2593.0
Highest channel	41565	2687.5	Highest channel	41540	2685.0
15 MHz			20 MHz		
Lowest channel	39725	2503.5	Lowest channel	39750	2506.0
Middle channel	40620	2593.0	Middle channel	40620	2593.0
Highest channel	41515	2682.5	Highest channel	41490	2680.0

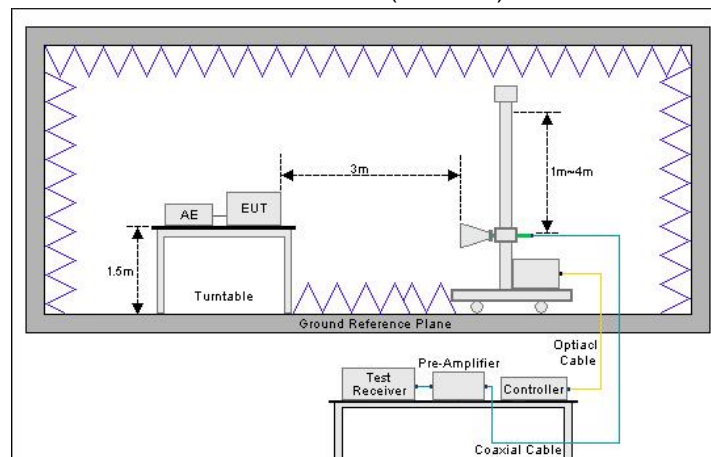
4.2 Test Setup

1) Radiated emission measurement:

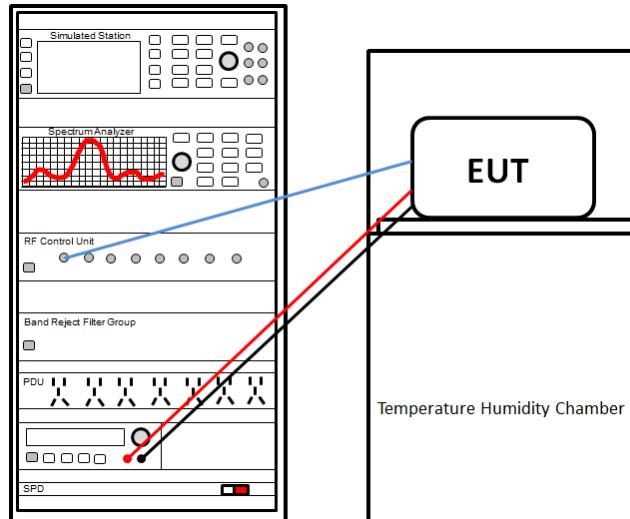
Below 1GHz (3m SAC)



Above 1GHz (3m SAC)



2) Conducted test method



4.3 Test Procedure

Test method	Test step
Radiated emission	<p>For below 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. <p>For above 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	<ol style="list-style-type: none"> The antenna port of EUT was connected to the test port of the test system through an RF cable. The EUT is keeping in continuous transmission mode and tested in all modulation modes. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5 Test Results

5.1 Summary

5.1.1 Clause and Data Summary

This report was amended on FCC ID: 2AG32EG3015MM30HP. The original report: JYTSZ-R12-2201514, issued by JianYan Testing Group Shenzhen Co., Ltd. The EG3015M-M30-HP-EUD and the original model were identical inside, the electrical circuit design, layout, components used and internal wiring, the differences between them as below: the software for EG3015M-M30-HP-EUD reduces the output power of LTE Band 48, update the model. So retest the LTE B48.

Test items	Standard clause	Test data	Result
RF Exposure	Part 1.1307 Part 2.1091	See Report: JYTSZ-R12-2202093	Pass
Effective Isotropic Radiated Power (EIRP)	Part 2.1046 Part 27.50 (h)(1) Part 96.41(b)	See Section 5.2 Appendix – LTE band 48	Pass
Peak-to-average power ratio (PAPR)	Part 96.41(g) Band 41:N/A report only	Appendix – LTE band 48	Pass
		For Band 41, reference report JYTSZ-R12-2201514	Pass*
99% Occupied Bandwidth -26 dB Occupied Bandwidth	Part 2.1049 Part 27.53(m) Part 96.41(e)(3)	Appendix – LTE band 48	Pass
		For Band 41, reference report JYTSZ-R12-2201514	Pass*
Emission Mask	Part 96.41(e)(1)	Appendix – LTE band 48	Pass
		For Band 41, reference report JYTSZ-R12-2201514	Pass*
Adjacent Channel Leakage Ratio	Part 96.41(e)(1)	Appendix – LTE band 48	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 27.53(m) Part 96.41(e)(1)(2)	Appendix – LTE band 48	Pass
		For Band 41, reference report JYTSZ-R12-2201514	Pass*
Field Strength of Spurious Radiation	Part 2.1053 Part 27.53(m) Part 96.41(e)(1)(2)	See Section 5.3	Pass
Frequency stability	Part 2.1055(a)(b) Part 27.54	Appendix – LTE band 48	Pass
		For Band 41, reference report JYTSZ-R12-2201514	Pass*
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. Duty cycle=(1.96ms/5ms)*100% 3. Offset Ext Gain = ATT loss + Cable loss + Duty cycle correction= 3dB + 1dB + 4dB(For Band 48) 4. Pass*: For band 41,please refer to FCC ID 2AG32EG3015MM30HP, report JYTSZ-R12-2201514 which is issued by JianYan Testing Group Shenzhen Co., Ltd.			

Test Method:	ANSI/TIA-603-E-2016 ANSI C63.26-2015 KDB 971168 D01 Power Meas License Digital Systems v03r01 KDB 940660 D01 Part 96 CBRS Eqpt v03 KDB 662911 D01 Multiple Transmitter Output v02r01
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5.1.2 Test Limit

Test items	Limit												
Effective Isotropic Radiated Power (EIRP) Power Spectral Density (PSD)	LTE band 41: Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power. LTE band 48: <table><tr><th>Device</th><th>Maximum EIRP (dBm/10 MHz)</th><th>Maximum PSD (dBm/MHz)</th></tr><tr><td>End User Device</td><td>23</td><td>N/A</td></tr><tr><td>Category A CBSD</td><td>30</td><td>20</td></tr><tr><td>Category B CBSD</td><td>47</td><td>37</td></tr></table>	Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)	End User Device	23	N/A	Category A CBSD	30	20	Category B CBSD	47	37
Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)											
End User Device	23	N/A											
Category A CBSD	30	20											
Category B CBSD	47	37											
Peak-to-Average Power Ratio	LTE band 41: N/A report only LTE band 48: The peak-to-average power ratio (PAPR) of any CBSD transmitter output power must not exceed 13 dB												
26dB Emission Bandwidth 99% Occupied Bandwidth	N/A												
Emission Mask	LTE band 48: (i) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by the SAS to CBSDs, the conducted power of any CBSD emission outside the fundamental emission bandwidth as specified in paragraph (e) (3) of this section (whether the emission is inside or outside of the authorized band) shall not exceed –13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any CBSD emission shall not exceed –25 dBm/MHz. The upper and lower SAS assigned channel edges are the upper and lower limits of any channel assigned to a CBSD by an SAS, or in the case of multiple contiguous channels, the upper and lower limits of the combined contiguous channels. (ii) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed –13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed –25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.												

Out of Band Emission at Antenna Terminals	<p>LTE band 41: For all fixed digital user stations, the attenuation factor shall be not less than $43 + 10 \log (P)$ dB at the channel edge.</p> <p>LTE band 48: Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.</p>
Field Strength of Spurious Radiation	
Frequency Stability	The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

5.2 Effective Isotropic Radiated Power (EIRP)

Sport check for Band 41:

Band	Bandwidth	Modulation	Channel	RB Configuration	ANT1 Conducted Power (dBm)	ANT3 Conducted Power (dBm)	MIMO Conducted Power (dBm)	MIMO EIRP (dBm)	EIRP Limit (dBm)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	26.23	26.31	29.28	32.78	33.01	PASS
Band41	5MHz	QPSK	40620	25RB#0	26.25	25.88	29.08	32.58	33.01	PASS
Band41	5MHz	QPSK	41565	25RB#0	25.67	25.79	28.74	32.24	33.01	PASS
Band41	5MHz	64QAM	39675	25RB#0	26.04	26.26	29.16	32.66	33.01	PASS
Band41	5MHz	64QAM	40620	25RB#0	25.56	25.98	28.79	32.29	33.01	PASS
Band41	5MHz	64QAM	41565	25RB#0	25.89	25.93	28.92	32.42	33.01	PASS

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi).

Band 48:

For 10MHz measurement bandwidth							
Modulation	Test channel	ANT. Port	Output Power (dBm/10MHz)	Total Power (dBm/10MHz)	Directional gain (dBi)	EIRP (dBm/10MHz)	Limit (dBm/10MHz)
QPSK (10MHz)	Lowest	ANT 1	14.14	17.19	5.5	22.69	23.00
		ANT 3	14.21				
	Middle	ANT 1	12.26	15.12		20.62	
		ANT 3	11.96				
	Highest	ANT 1	13.43	16.31		21.82	
		ANT 3	13.16				
64QAM (10MHz)	Lowest	ANT 1	14.21	17.30	5.5	22.80	23.00
		ANT 3	14.36				
	Middle	ANT 1	12.52	15.27		20.77	
		ANT 3	11.98				
	Highest	ANT 1	13.46	16.55		22.05	
		ANT 3	13.61				
QPSK (20MHz)	Lowest	ANT 1	14.25	17.20	5.5	22.70	23.00
		ANT 3	14.12				
	Middle	ANT 1	12.17	14.98		20.48	
		ANT 3	11.75				
	Highest	ANT 1	12.90	15.43		20.93	
		ANT 3	11.89				
64QAM (20MHz)	Lowest	ANT 1	14.19	17.21	5.5	22.71	23.00
		ANT 3	14.21				
	Middle	ANT 1	12.07	15.10		20.60	
		ANT 3	12.11				
	Highest	ANT 1	12.64	15.74		21.24	
		ANT 3	12.81				
Remark: 1. All transmit signals are completely uncorrelated with each other, Directional gain = GANT =5.5 dBi.							

For 20Mz bandwidth measurement bandwidth							
Modulation	Test channel	ANT. Port	Output Power (dBm/20MHz)	Total Power (dBm/20MHz)	Directional gain (dBi)	EIRP (dBm/20MHz)	Limit (dBm/20 MHz)
QPSK (20MHz)	Lowest	ANT 1	16.68	19.79	5.5	25.29	N/A
		ANT 3	16.88				
	Middle	ANT 1	15.69	18.56		24.06	
		ANT 3	15.40				
	Highest	ANT 1	15.62	18.54		24.04	
		ANT 3	15.43				
64QAM (20MHz)	Lowest	ANT 1	16.16	19.39	5.5	24.89	N/A
		ANT 3	16.59				
	Middle	ANT 1	15.22	18.03		23.53	
		ANT 3	14.81				
	Highest	ANT 1	15.96	18.76		24.26	
		ANT 3	15.52				
Remark: 1. All transmit signals are completely uncorrelated with each other. Directional gain = GANT =5.5 dBi.							

5.3 Field Strength of Spurious Radiation

Sport check for Band 41:

LTE band 41 – 20 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5012.00	-37.48	3.70	-33.78	-13.00	20.78	Vertical
7518.00	-42.91	11.74	-31.17	-13.00	18.17	Vertical
10024.00	-36.31	17.18	-19.13	-13.00	6.13	Vertical
5012.00	-29.94	3.26	-26.68	-13.00	13.68	Horizontal
7518.00	-41.05	10.25	-30.80	-13.00	17.80	Horizontal
10024.00	-37.25	16.69	-20.56	-13.00	7.56	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5186.00	-37.46	4.00	-33.46	-13.00	20.46	Vertical
7779.00	-42.67	11.19	-31.48	-13.00	18.48	Vertical
10372.00	-36.01	19.16	-16.85	-13.00	3.85	Vertical
5186.00	-29.85	3.50	-26.35	-13.00	13.35	Horizontal
7779.00	-41.34	10.72	-30.62	-13.00	17.62	Horizontal
10372.00	-36.26	17.88	-18.38	-13.00	5.38	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5360.00	-37.62	3.87	-33.75	-13.00	20.75	Vertical
8040.00	-42.73	12.42	-30.31	-13.00	17.31	Vertical
10720.00	-35.72	19.45	-16.27	-13.00	3.27	Vertical
5360.00	-29.34	3.36	-25.98	-13.00	12.98	Horizontal
8040.00	-41.56	11.96	-29.60	-13.00	16.60	Horizontal
10720.00	-37.02	18.93	-18.09	-13.00	5.09	Horizontal
Remark: 1. The emission levels of below 1 GHz are lower than the limit 20dB, so not show in test report.						

Remark: During the test, pre-scan the QPSK, 64QAM modulation, and found the QPSK modulation is the worst case.(for Band 48)

LTE band 48 (20 MHz) - QPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7120.00	-52.36	3.70	-48.66	-40.00	8.66	Vertical
10680.00	-57.86	11.74	-46.12	-40.00	6.12	Vertical
7120.00	-51.79	3.26	-48.53	-40.00	8.53	Horizontal
10680.00	-55.88	10.25	-45.63	-40.00	5.63	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7250.00	-52.48	4.00	-48.48	-40.00	8.48	Vertical
10875.00	-56.75	11.19	-45.56	-40.00	5.56	Vertical
7250.00	-49.68	3.50	-46.18	-40.00	6.18	Horizontal
10875.00	-56.18	10.72	-45.46	-40.00	5.46	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7380.00	-52.48	3.87	-48.61	-40.00	8.61	Vertical
11070.00	-57.64	12.42	-45.22	-40.00	5.22	Vertical
7380.00	-51.62	3.36	-48.26	-40.00	8.26	Horizontal
11070.00	-58.56	11.96	-46.60	-40.00	6.60	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.						

Note: During the test, pre-scan all modulation and bandwidth, and found the QPSK modulation and bandwidth of 20MHz is the worst case.

-----End of report-----